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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,180	01/12/2001	Paramvir Bahl	MS1-566US	2778

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LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER	
BATES, KEVIN T	
ART UNIT	**PAPER NUMBER**
2155	

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/760,180	BAHL, PARAMVIR	
	Examiner	Art Unit	
	Kevin Bates	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-18,25-27,45-54 and 63-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-18, 25-27, 45-54, and 63-67* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

This Office Action is in response to a communication made on January 13, 2006.

Claims 1-15, 19-24, 28-44, and 55-62 have been cancelled.

Claims 16-18, 25-27, 45-54, and 63-67 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16-18, 25-27, 45-50, 52-54, and 63-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn (5659596) in view of Dent (5404376).

Regarding claim 16, Dunn teaches a method, comprising:

determining a location of a computing unit (Column 16, lines 40 – 46);

periodically transmitting, from the computing unit, the location of the computing unit to a network server together with a user name of a user using the computing unit (Column 8, lines 20 – 24); and

including an active signal with the periodically transmitted information when the user is actively using the computing unit (Column 17, lines 14 – 21).

Dunn does not explicitly indicate using RF signals and a plurality of RF beacons having known locations and using environmental profiling to establish the location of the computing unit.

Dent teaches a method of determining location information by a computer unit that includes using RF signals and a plurality of RF beacons having known locations and using environmental profiling to establish the location of the computing unit (Column 4, lines 32 – 50; Column 5, lines 4 – 6) and reporting the information (Column 10, lines 30 – 34).

It would have been obvious to use Dent's teaching of a mobile computer unit being able to locate itself using signal strengths and profiles of base stations in Dunn's system in order to create an more accurate location of the mobile device based on sector and bearing (Column 2, lines 63 – 66).

Regarding claim 17, Dunn teaches the method as recited in claim 16, wherein the computing unit is a mobile computing unit; and the network server is a wireless network server (Column 16, lines 33 – 37).

Regarding claim 18, Dunn teaches the method as recited in claim 16, futher comprising time-stamping the transmission to the network server and transmitting the time stamp with the transmitted information (Column 8, lines 15 – 24).

Regarding claim 25, Dunn teaches the method as recited in claim 16, wherein the user actively using the computing unit further comprises the user having used the computing unit to within a pre-defined time period (Column 28, lines 30 – 35).

Regarding claim 26, Dunn teaches the method as recited in claim 16, wherein transmitting the location of the computer unit to a network server only occurs upon a request from the network server for the computer unit to update the is location of the computer unit (Column 27, line 39 – Column 28, line 6).

Regarding claim 27, Dunn teaches the method as recited in claim 16, further comprising encrypting the location of the computing unit prior to transmitting the location of the computing unit to the network server (Column 24, lines 45 – 47).

Regarding claim 45, Dunn teaches a mobile computing unit, comprising:

memory;

a wireless network interface configured to connect the mobile computing unit to multiple wireless access points of one or more remote servers (Column 16, lines 33 – 37);

a location tracking service configured to determine a location of the mobile computer unit (Column 16, lines 40 – 46); and

a location manager configured to periodically transmit the location of the mobile computing unit to one or more of remote server via the wireless network interface (Column 8, lines 20 – 24).

Dunn does not explicitly indicate using a beacon packet's signal strength received from the wireless access point and using a pervious established radio map.

Dent teaches a method of determining location information by a computer unit that includes using RF signals and a plurality of RF beacons having known locations and using environmental profiling to establish the location of the computing unit (Column 4, lines 32 – 50; Column 5, lines 4 – 6) and reporting the information (Column 10, lines 30 – 34).

It would have been obvious to use Dent's teaching of a mobile computer unit being able to locate itself using signal strengths and profiles of base stations in Dunn's

system in order to create an more accurate location of the mobile device based on sector and bearing (Column 2, lines 63 – 66).

Regarding claim 46, Dunn teaches the mobile computing unit as recited in claim 45, wherein the location manager is further configured to transmit a user name of a user logged onto the mobile computing unit to one or more of the remote servers together with the location of the mobile computing unit (Column 8, lines 20 – 24).

Regarding claim 47, Dunn teaches the mobile computing unit as recited in claim 45, wherein the location manager is further configured to transmit an active signal to one or more of the remote servers together with the location of the mobile computing unit when a user logged is onto the mobile computing unit has actively used the unit within a specified period of time (Column 17, lines 14 – 21).

Regarding claim 48, Dunn teaches the mobile computer using as recited in claim 45, further comprising a clock, and wherein the location manager is further configured to time-stamp the transmission of the location information with a time that the transmission is sent (Column 8, lines 15 – 24).

Regarding claim 49, Dunn teaches the mobile computing unit as recited in claim 45, wherein the location manager identifies and transmits the location of a network node with which the mobile computing unit is communicating as the location of the mobile computing unit (Column 19, lines 21 – 24).

Regarding claim 50, Dunn teaches the mobile computing unit as recited in claim 45, wherein the location manager is configured to invoke the location tracking service

when commanded to do so by a second computing unit or one or more of the remote servers (Column 27, line 39 – Column 28, line 6).

Regarding claim 51, Dunn teaches the system as recited in claim 45.

Dunn does not explicitly indicate that the location manager transmits an absolute location of the mobile unit to one or more of the remote servers.

Dent discloses that the mobile unit calculates the distance of the computing unit from a base station and obtains enough information to assume the exact location of the mobile unit (Column 5, line 44 – Column 6, line 7).

It would have been obvious to use Dent's teaching of a mobile computer unit being able to locate itself using signal strengths and profiles of base stations in Dunn's system in order to create an more accurate location of the mobile device based on sector and bearing (Column 2, lines 63 – 66).

Regarding claim 52, Dunn teaches the mobile computing unit as recited in claim 45.

Dunn does not explicitly indicate that the location manager transmits the location of the mobile computing unit relative to a known absolute location.

Dent discloses that the mobile unit calculates the distance of the computing unit from a base station (Column 4, lines 44 – 50; Column 5, Table 1).

It would have been obvious to use Dent's teaching of a mobile computer unit being able to locate itself using signal strengths and profiles of base stations in Dunn's system in order to create an more accurate location of the mobile device based on sector and bearing (Column 2, lines 63 – 66).

Regarding claim 53, Dunn teaches the mobile computing unit as recited in claim 45.

Dunn does not explicitly indicate that the location manager transmits a geographic region to one or more of the remote servers as the location of the mobile computing unit.

Dent discloses that the mobile unit calculates the distance of the computing unit from a base station (Column 4, lines 44 – 50; Column 5, Table 1).

It would have been obvious to use Dent's teaching of a mobile computer unit being able to locate itself using signal strengths and profiles of base stations in Dunn's system in order to create an more accurate location of the mobile device based on sector and bearing (Column 2, lines 63 – 66).

Regarding claim 54, Dunn teaches the mobile computing unit as recited in claim 45, wherein the location manager is further configured to encrypt the location of the mobile computing unit before transmitting the location of the mobile computing unit to one or more of the remote servers (Column 24, lines 45 – 47).

Regarding claim 63, Dunn teaches a method comprising:

receiving radio frequency transmissions emitted from a plurality of radio frequency base stations of a wireless local area network;

identifying the location of the mobile computing device as that of a computer user (Column 16, lines 40 – 46);

receiving a request for the location of the computer user from a computing unit (Column 27, line 39 – Column 28, line 6); and

transmitting the location of the computer user to the computing unit (Column 8, lines 20 – 24).

Dunn does not explicitly indicate measuring relative strengths of the radio frequency transmissions; determining a location of a mobile computing device based on the relative strengths.

Dent teaches a method of determining location information by a computer unit that includes using RF signals and a plurality of RF beacons having known locations and using environmental profiling to establish the location of the computing unit (Column 4, lines 32 – 50; Column 5, lines 4 – 6) and reporting the information (Column 10, lines 30 – 34).

It would have been obvious to use Dent's teaching of a mobile computer unit being able to locate itself using signal strengths and profiles of base stations in Dunn's system in order to create an more accurate location of the mobile device based on sector and bearing (Column 2, lines 63 – 66).

Regarding claim 64, Dunn teaches the method of claim 63.

Dunn does not explicitly indicate that the acts receiving the radio frequency transmissions, measuring the relative strengths, and determining the location are performed by the mobile computer device.

Dent teaches a method of determining location information by a computer unit that includes using RF signals and a plurality of RF beacons having known locations and using environmental profiling to establish the location of the computing unit

(Column 4, lines 32 – 50; Column 5, lines 4 – 6) and reporting the information (Column 10, lines 30 – 34).

It would have been obvious to use Dent's teaching of a mobile computer unit being able to locate itself using signal strengths and profiles of base stations in Dunn's system in order to create an more accurate location of the mobile device based on sector and bearing (Column 2, lines 63 – 66).

Regarding claim 65, Dunn teaches the method of claim 63, wherein the act of identifying the location of the mobile computer device as that of the computer use comprises receiving from the mobile computer device, an identifier associated with the computer user (Column 8, lines 20 – 24).

Regarding claim 66, Dunn teaches the method of claim 63, further comprising a system that includes locating mobile devices. Included in this teaching is a system of time-stamping the location information of the mobile device (Column 8, lines 15 – 24).

Regarding claim 67, Dunn teaches the method of claim 63, further comprising: receiving an active signal indicating that he computer user has actively used the mobile computer device within a specified period of time, and wherein the act of identifying the location comprises defining the location of the mobile computer device as that the computer user if the active signal has been received within a predetermined period of time (Column 17, lines 14 – 21).

Response to Arguments

Applicant's arguments with respect to claims 16-18, 25-27, 45-54, and 63-67 have been considered but are moot in view of the new ground(s) of rejection.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 6799047 issued to Bahl, because it discloses locating users using location profile data.

U. S. Patent No. 6839560 issued to Bahl, because it discloses using signal strength to determine user location.

U. S. Patent No. 6512478 issued to Chien, because it discloses using signal strength to track a device.

U. S. Patent No. 6091362 issued to Stilp, because it discloses a base station using other base stations to figure out its location.

U. S. Patent No. 5666662 issued to Shibuya, because it discloses using a mobile unit's signal strength to locate it in a network.

U. S. Patent No. 5515062 issued to Maine, because it discloses locating users based on signal strength.

U. S. Patent No. 6167274 issued to Smith, because it discloses finding user locations using base station signal strengths.

U. S. Patent No. 7020475 issued to Bahl, because it discloses using a table and profile to track user locations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB
March 29, 2006

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER